

MEMORANDUM

March 5, 2008

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THROUGH: Matthew J. Eichner, Assistant Director

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RE: Risk Management Reviews of Consolidated Supervised Entities

Office of Prudential Supervision and Risk Analysis ("OPSRA") staff met over the past four weeks with senior risk managers at the CSEs to review current market and credit risk packages.

There were several common themes in discussions with firms:

- **Auction rate securities markets collapsed.** Auction rate securities ("ARS") are typically corporate or municipal debt instruments with long-term maturities for which the interest rate is frequently reset through a Dutch auction. In a Dutch auction, a broker-dealer submits bids on behalf of current and prospective investors to the auction agent. Based on the submitted bids, the auction agent will set the interest rate for the next period at the lowest rate to clear the total outstanding amount of ARS. If there are not enough orders to purchase all the bonds being sold at the auction, a "failed" auction occurs and the coupon rate for the instrument resets to a "maximum rate" that is specified in the terms of program. Until the next auction, investors are locked in, although at the higher rate. Broker-dealers performing as auction agents for ARS programs have generally avoided auction failures by bidding on their own behalf to clear the auction. Until recently, auction failures were rare.

Risk managers noted that ARS markets became stressed during the last couple of weeks in January when a handful of small auctions for student loan debt failed. Most of the concern stemmed from low maximum rates on student loan debt instruments—which is frequently a small spread over LIBOR rather than the much higher rates – often upwards of 15% – cited in press articles relating to other ARS programs. The fear was that the relatively low maximum rates would not compensate bidders if auctions failed and their investment period extended. Through the end of January and into February, the pace of auction failures increased, but was still isolated to mostly student loan debt with low maximum rates. By the second week of February, many CSE firms were at their "hard limits" for the amount of ARS they were willing to hold as a result of bidding to support auctions. This limited appetite, combined with nervousness by other market participants, resulted in mass auction failures on February 12 and 13 for both student loan and municipal ARS. As long as other auction agents were

supporting their auctions, the securities firms and banks functioning in this capacity were reluctant to allow auctions to fail, supporting them with the firms' own capital if necessary. But once some firms began to allow auction failures, the others rapidly followed.

With respect to growth in inventory as a result of supporting auctions, almost all risk managers indicated that there was good internal communication between Treasury, Credit, and trading desks during this period. From a risk management perspective, they felt that the controls in place functioned as intended. Firms set limits on the amount of inventory they would acquire to support auctions and, when this level was reached, provided no further support.

- **Risk managers are becoming increasingly concerned about commercial mortgage markets as well as residential near-prime (Alt-A) markets.** All risk managers mentioned that there has been more contagion from subprime into commercial mortgages and near-prime Alt-A residential markets than was previously anticipated. During the month of January, the CMBX index—the ABX's commercial mortgage counterpart—widened significantly. Triple-B minus spreads widened by 500 basis points to 1500 by the end of January and continued to widen to 1700 basis points throughout the month of February. Triple-A spreads ended the 2007 year at roughly 50 basis points and have widened to over 200 basis points.

The combination of spreads widening and general market sentiment resulted in zero commercial mortgage backed security ("CMBS") deals being priced in January and only a couple being done in February. For comparison, 12 CMBS securitizations totaling \$13 billion were completed in December alone. Risk managers noted that CMBS spread widening has been driven by market sentiment and not by fundamentals such as defaults, delays, or delinquencies. They also noted that liquidity remains relatively good for CMBS index trades, but are concerned that this product area could experience rapid deterioration if the underlying performance on commercial property deteriorates.

Residential mortgage backed securities ("RMBS") backed by near-prime Alt-A collateral have deteriorated in recent months as delinquency rates have exceeded previous estimates. The impact of the deterioration on valuations has been difficult for risk managers to assess because trade flow has decreased significantly leaving limited visibility. Also important is the fact that indexes do not exist for Alt-A RMBS as they do for CMBS and subprime RMBS. Consequently, in addition to these instruments being difficult to price (because of limited visibility), they are also difficult to hedge.

Alt-A

- **Hedge funds suffered significant losses, but CSE firms remain comfortable with counterparty exposure.** All risk managers indicated that January was a difficult performance month for hedge funds. Poor performance was evident across multiple trading strategies, but risk managers thought that equity funds and municipal funds were hit hardest. Many hedge funds were under their high water marks for collecting fees, and there is an expectation that redemptions will accelerate going forward. From a near term credit perspective, most risk managers are comfortable with their hedge fund counterparty exposure because most margin calls are being met with little resistance (even the unusually large ones). One firm indicated that they would have been much more concerned if this had occurred last year when hedge funds operated with much higher leverage. The sense among risk managers was that significant delevering had occurred through 2007.

While risk managers are comfortable in the near term, they are being careful not to weaken their contractual protections going forward. For example, in situations where hedge funds hit monthly performance or NAV triggers—such as those typically included in over-the-counter ("OTC") derivatives contracts—firms are carefully evaluating their options and how exercising (or not exercising) those options impacts their rights going forward. The general consensus is that firms are not looking to hastily invoke their options to cancel OTC derivative trades, but

at the same time are cautious in protecting their rights with respect to future performance or NAV triggers (i.e., they do not want to give up rights to cancel trades if quarterly triggers are hit).

One firm is also reassessing whether it wants to remain in the derivatives prime brokerage business. They expect to maintain their activities in equity prime brokerage, but feel the need to reduce their exposure in derivatives prime brokerage because of the relatively low return on risk associated with this business. This decision has prompted the firm to enter into discussions with a large hedge fund about moving its derivatives prime brokerage trades to other institutions.

With respect to Sailfish Capital Partners, a large credit strategies hedge fund that is liquidating following poor performance through 2007, risk managers reported that they are pleased with Sailfish's handling of its unwind. Two risk managers stated that, from a creditor's perspective, they were comfortable with the situation because (1) they felt that Sailfish was doing everything it could to ensure an orderly unwind and (2) many trades were well collateralized with upfront cash collateral.

- **Firms are re-assessing their limit structures in light of lower risk appetites.** Many firms mentioned the need for limit reviews due to continued market deterioration combined with a reduction in risk appetite in some product areas. In addition, the use of atypical hedging strategies, such as subprime indices against prime and Alt-A residential mortgage exposure, has continued. Basis risks have therefore increased, a trend that has prompted development of new basis risk limits. In addition to new limits, risk managers are also recommending enhancements to the calculation of current limit metrics (e.g., stress scenario limits).

Another area of focus is sovereign risk exposure. Some firms are refining their limits to include crash scenario limits for sovereign countries—as opposed to simply relying on limits tied to spread levels. New scenario limits being considered include China and Russia crash scenario limits.

- **Terms on new leveraged loan deals are improving for CSE firms.** Most firms indicated that in addition to being very selective about new leveraged loan business, they are also getting deal terms that were unheard of last year. One credit risk manager noted that they have even structured deals with market MAC clauses. A market MAC clause provides underwriting banks with protection against having to fund deals if significant deterioration in market conditions prevents deal syndication (after pricing and other adjustments have been made). For example, one firm discussed a deal containing a market MAC clause that was unsuccessfully syndicated twice. Because of the clause, the deal has not been funded. The validity of market MAC clauses is currently being tested in the courts, but credit risk managers indicated that firms have been very diligent about ensuring that the proper language is in place and that their willingness to use such clauses is clearly expressed in the documentation.

While not all firms mentioned the use of market MAC clauses, they did mention the ability to get full “flex” in new deals. Flex allows arrangers to either adjust a loan's pricing, its structure or its amortization schedule to clear the market for that particular credit. While terms for new deals are much better than last year, firms also noted that the inclusion of significantly better terms has not been enough to entice investors back into the leveraged loan market.

We also expect to discuss the following firm-specific issues during the next round of meetings:

#### Bear Stearns

- Bear incurred losses on adjustable rate mortgage and structured credit inventory positions in the (preliminary) range of \$400 million. However, gains elsewhere, including from the firm's

recently established systemic and recessionary-based hedging program, offset these losses. Given the size of the more unconventional hedges (which are largely views on the shapes of yield curves) and the significant basis risk that arises between these positions and the firm's long inventory assets, the hedging program is being actively monitored and discussed at the senior-most levels of the firm.

- Under current market conditions the gross risk profile of the Structured Credit desk has become somewhat unstable, meaning that small changes in positions introduce large changes in measured risk. Although the desk is in risk reduction mode, there are, given the complexities involved in trading a book of bespoke credit tranches, varying internal opinions regarding the optimum strategy for executing risk-reducing transactions. We intend to discuss in more detail with product line risk management next month the particular issues involved in understanding and articulating the book's risk profile, the latest work performed in verifying front office bespoke valuations, and action taken to reduce basis risk exposures.
- RMBS backed by Alt-A collateral, much of which is adjustable rate, is under considerable price pressure and liquidity is quite limited. Risk management's price verification of subordinate Alt-A bonds has become a pure exercise in fundamental cash flow analysis, which requires the econometric forecasting of default losses. This is obviously a challenging task given the limited amount of historical data available for these products, coupled with the current interest rate and credit environment. Given higher than expected delinquency rates exhibited in the most recent Alt-A remittance reports, Bear's cumulative loss estimates are rising rapidly, which could result in additional (and sizable) mark downs. We continue to discuss mortgage price verification with risk managers. Alt-A

#### Goldman Sachs

- At the time of our meeting market risk managers were finalizing the 2007 year-end limits review. In previous years this analysis has largely been provided to senior management as a tool for deciding limit increases and decreases as per existing metrics (such as VaR and the Credit Spread Widening scenario). This year, however, risk managers are also making significant recommendations regarding the actual metrics used for setting limits – in terms of adding entirely new limiting metrics as well as enhancing methodologies currently in place. For instance, Market Risk has performed considerable work with respect to the measurement and limiting of sovereign risk. Risk managers are also proposing new limits for some particular basis risks that have become material. We will review these analyses with market risk managers next month.

#### Lehman Brothers

- Lehman's VaR dropped significantly this month, from \$145 million to \$108 million. This was driven primarily by a reduction in the fixed income division's risk, which resulted from an increase in diversification, or position offsetting, between the various businesses. In addition, the equity division had a slight reduction in VaR, and has continued to reduce its equity delta, sometimes ending the day with an overall short position.
- The leveraged finance pipeline continues to shrink, and currently stands at under \$3 billion. Lehman had limited success in syndicating commitments, resulting in Lehman's actual funded commitments increasing by \$500 million. There are currently very few non-investment grade commitments on the horizon.
- Following S&P's recent downgrades of RMBS and CDOs, two Lehman-originated ABS CDOs triggered an Event of Default ("EoD"), as the downgrades affected the overcollateralization test. These EoDs forced the liquidation of the collateral. Lehman's current exposure to the two CDOs is \$1.9 billion, generated from the purchase of CDS protection from the CDOs. The two vehicles have \$1.2 billion in cash to cover that exposure, and the shortfall will be

covered by the senior notes. In one case, Lehman owns the senior notes and will bear the losses (around \$200 million). For the other CDO, there is a guarantee from a large financial institution, and Lehman expects to be paid in full. Credit risk managers expect the EoD to be hit for Lehman's other two originated CDOs in the upcoming months. These CDOs also have guarantees from large financial institutions.

#### Merrill Lynch

- Along with other firms, Merrill Lynch's senior management elected to stop supporting the auction market by allowing auctions where Merrill was either the lead or the sole manager to fail. Auction failures have largely affected the holders of closed-end funds. Due to limited transparency, investors are uncertain regarding the degree that underlying assets are affected by a failed auction. Thus investors find it difficult to sell their fund positions. To aid retail clients, Merrill has agreed to provide financing on closed end funds on a loan to value basis of 30 – 50%. But given other liquidity needs and the high cost of funding, appetite for providing this facility is limited.
- Merrill is continuing to see very little activity within the commercial real estate space and is still focused on reducing their book. With the sale of ML Capital and the start up of their Asian Real Estate Fund, Merrill has reduced their commercial real estate exposure by 40%. The book will continue to shrink as Merrill is in the midst of creating an EMEA Real Estate Fund. The size of the fund is targeted to be 750 million Euros.

#### Morgan Stanley

- Morgan Stanley's pre-hedged current exposure to monolines more than doubled since December month-end to almost \$4 billion as spreads widened significantly on CMBS, an area where the firm had bought significant amounts of protection from MBIA. As of the date of our meeting, the firm had hedged a significant portion of this exposure. We will continue to monitor the firm's hedging activities in this area.
- The Credit Risk Analytics group has developed a new methodology for calculating expected positive exposure and potential exposure for trades that do not currently fit into the firm's credit simulation engine, either because a model has not been developed for the trade type or because of data issues. We discussed this new approach at this month's meeting and have requested additional information.
- Measured risk for the commodities division is approaching the relevant VaR limit, and the firm is considering both changes in the methodology and changes to commodity limits. The firm is looking at the way seasonality related to natural gas trades is treated in the VaR calculation. Risk managers point out that if methodological changes reduce the level of commodities VaR, that the firm will also reduce VaR limits concurrently (mainly because of poor performance on commodity desks in 2007). We will follow up with a complete discussion around VaR and limit changes.
- As expected, the firm recently announced the departure of Tom Daula, Chief Risk Officer, as well as the hiring of a new "Risk Overseer." A new CRO has not yet been named, but Tom Daula has indicated that he will step down soon after this occurs. We will gain a better understanding of the impact of these personnel changes on the risk management infrastructure at Morgan Stanley as further decisions on personnel and structure are made.